Assessment of Student Learning Outcomes

Universities and faculty in the 21st century much confront a number of interests, innovations, and imperatives that are combining to prompt institutional, curricular, and pedagogical change. These elements include:

- A transformation from a teaching paradigm to a learning paradigm and a simultaneous move toward a "culture of inquiry and evidence." (Angelo)
- Increased accountability from and by all stakeholders in higher education in regards to student learning.

Benefits and Consequences regarding Assessment of Student Learning

What happens if we don't move forward toward developing a culture of systematic and sustained assessment of student learning at IUP?

1. **We disadvantage ourselves** in terms of student recruitment and retention.
    - For multiple reasons, we are in a period of hypercompetitiveness regarding recruitment (and retention) of students.
    - Students are not just trying to earn a degree. They are looking for earning power, employment, and a financial return on their tuition dollar.
2. **We disadvantage our students** by failing to systematically assess whether or not they are learning what we say they are learning.
    - IUP claims to provide a high-quality educational experiences for students. However, we do not have data to back up our claims.
    - We can make decisions about curriculum development with or without data. We are an institution of higher education; we should be using data to drive our decisions.
3. **We risk disadvantaging faculty** who will be less competitive in the research arena without full accounting of learning outcomes and assessment
4. **We jeopardize re-accreditation and funding.**
    - Student financial aid is dependent about accreditation. If we lose our accreditation, students lose funding. If students cannot get funding, we lose students. If we do not have students, we cannot sustain programs.
5. **We risk having assessment imposed upon us.**
    - We risk the threat of standardized testing replacing thoughtful and discipline-specific learning outcomes.

What happens if we do this well?

1. **Students will benefit from:**
   - Knowing what is expected of them in coursework, in general education, and in the major
   - Learning experiences that are driven by data and efforts for continuous improvement of teaching and learning

2. **Individual faculty will benefit from:**
   - More information about what and how students are learning;
   - Better informed and reflective students who understand the learning goals of each class.
3. **Departments will benefit from**:
   - Qualitative and quantitative evidence that students are mastering content and developing expertise;
   - Maintaining internal control of their students' learning outcomes rather than having them imposed from an external source.
4. **The institution will benefit from:**
   - Connections across the curriculum supporting student learning and effective teaching;
   - The ability to demonstrate educational effectiveness to all of its various constituencies
   - Improved recruitment, retention, graduation rates, and job placement—and associated economic benefits
   - Enhanced reputation for innovation in higher education

IUP basic beliefs regarding assessment

- Assessment processes should be simple, systematic, and sustainable.
- Assessment should be useful and faculty-driven
- Assessment is a scholarly activity that can result is substantial benefits to faculty, programs, and students.
- Assessment can be conducted efficiently and effectively with ordinary people's available time, resources, and expertise.

Developing & Writing Course-Level Student Learning Outcomes

What are Course-Level Student Learning Outcomes?

Course level Student Learning Outcomes (SLOs) describe the knowledge, skills, and abilities students can expect to attain during your course

- Course outcomes should clearly relate to topics, assignments, and exams that are covered in the present course.
- Course outcomes should be clear, measurable, use verbs (e.g., identify, recall,) and may contribute to the assessment of program level student learning outcomes (PLSLOs). (See handouts with list of measurable action verbs)
- Write student learning outcomes so that students and individuals who do not share your disciplinary expertise will understand the knowledge, skills, abilities, and values they can expect to attain in your course.
- Course outcomes are more detailed and specific than program level student learning outcomes because they identify the unique knowledge and skills expected to be gained from a given course. However, course outcomes should be broad and general enough to accommodate changes in course content over time. For example, a course outcomes may be written as "the student will be able to describe the major concepts, theoretical perspectives, and historical trends within a specialty area." Not including specific concepts, perspectives, and trends will allow an instructor to add to those concepts/perspectives/theories that are newly-emerging without re-writing the course outcome.
- Course outcomes contribute to the achievement of program level student learning outcomes. For example, if a program level outcome is: "students will be able to describe the major concepts, theoretical perspectives, and historical trends in psychology," a course outcome may be: "students will be able to describe the major concepts, theoretical perspectives, and historical trends in abnormal psychology" (i.e., a specific component of the discipline).

Writing a Course Outcome

- **Unclear:** The course will introduce students to major periods in the history of western music.
- **Clear**: The student will be able to identify and summarize the important features of major periods in the history of western music.

- **Unclear**: The student will understand important concepts and principles.
- **Clear**: The student will be able to apply important concepts and principles of psychology to draw conclusions about populations from samples.
- **Clear**: The student will be able to describe the operations of financial institutions and the services they provide.

- **Unclear**: The student will write a term paper on a topic of personal interest.
- **Clear**: The student will be able to demonstrate your knowledge about the significance of current research in the field by writing a research report.
- **Clear**: The student will be able to prepare and present effective, informative, and persuasive public speeches.

Additional Important Points

- It is possible for courses to have additional course learning outcomes that may not contribute to overall programmatic outcomes.
- The relationship between course and programmatic outcomes are described in a curriculum map (Click here for an example of a curriculum map).

Additional References

- Detailed information and examples can be found in the pdf: *Reference materials and helpful guidelines for writing program- and course-level student learning outcomes*.
- Barbara Walvoord text (available to borrow from the Provost Associate's office) Assessment Clear and Simple.
- University of West Florida's Center for University Teaching, Learning, and Assessment.
- Cornell University Center for Teaching Excellence provides detailed information about course- versus program-level assessment.
- The University of Hawaii at Manoa has many workshops, including one focusing on course-level outcomes, and includes both PowerPoint slides and handouts.

Developing Course Outcomes
Worksheet A

Step 1:

- Think about a course you have taught, would like to teach, or are currently taking.
- Ask yourself: What are the 4-6 most important things (essential skills) students should be able to do, demonstrate, or know as a result of the course?
- Make a list of these below

1.

2.

3.

4.

5.

6.

Developing Course Outcomes
Worksheet B

Step 2:

- Develop a SLO for each skill, ability, or behavior listed in Step 1.
- Start each with a measurable action verb of what the student will be able to do.

1.

2.

3.

4.

5.

6.

Course Level Student Learning Outcomes Checklist

Step 3
Compare each of the outcomes you developed on Worksheet B to the checklist

	Describes one of the major skills, abilities or skills that is an intended outcome for a course.
	Represents a skill that a competent individual would use outside the context of the course.
	Begins with an action verb describing what the learner will be able to do upon completion of the course.
	Is clear, measurable, and observable.
	Requires application of skill, knowledge, or ability.
	Specifies a SINGLE performance/outcome, not a combination.
	Describes the learner's performance, not the instructor's activities, learning plans, or instructional strategies

Action Words for Bloom's Taxonomy

Sample of 176 unique words identified for a level of Bloom by 4 or more lists in a sample of 30 published lists (*f* = number of lists that nominate the word for a level of Bloom).

This document reformats **Table 1,** published in Stanny, C. J. (2016). Reevaluating Bloom's Taxonomy: What Measurable Verbs Can and Cannont Say about Student Learning. *Education Sciences, 6* (4), *37*; doi:10.3390/educsci6040037, for single-page printing. Used under CC-BY, licensed under CC-BY by Claudia J. Stanny.

Knowledge	*f*	Understand	*f*	Apply	*f*	Analyze	*f*	Evaluate	*f*	Create	*f*
arrange	6	articulate	4	act	19	analyze	24	appraise	22	arrange	22
choose	4	associate	4	adapt	4	appraise	11	argue	12	assemble	14
cite	17	characterize	4	apply	22	break	8	arrange	5	categorize	7
copy	4	cite	4	back / back up	5	break down	7	assess	17	choose	7
define	21	clarify	5	calculate	10	calculate	9	attach	4	collect	9
describe	14	classify	18	change	9	categorize	19	choose	10	combine	14
draw	5	compare	11	choose	11	classify	10	compare	18	compile	7
duplicate	7	contrast	7	classify	6	compare	24	conclude	13	compose	19
identify	20	convert	13	complete	5	conclude	6	contrast	8	construct	29
indicate	4	defend	12	compute	10	contrast	19	core	6	create	19
label	21	demonstrate	6	construct	13	correlate	5	counsel	4	design	24
list	27	describe	22	demonstrate	20	criticize	11	create	4	develop	18
locate	10	differentiate	8	develop	4	debate	8	criticize	11	devise	13
match	14	discuss	21	discover	8	deduce	6	critique	14	estimate	5
memorize	10	distinguish	12	dramatize	16	detect	7	decide	4	evaluate	4
name	22	estimate	11	employ	16	diagnose	4	defend	15	explain	8
order	5	explain	28	experiment	6	diagram	12	describe	4	facilitate	4
outline	11	express	17	explain	5	differentiate	20	design	4	formulate	18
quote	7	extend	11	generalize	5	discover	4	determine	6	generalize	7
read	4	extrapolate	5	identify	4	discriminate	11	discriminate	9	generate	11
recall	24	generalize	11	illustrate	18	dissect	6	estimate	15	hypothesize	8
recite	12	give	4	implement	4	distinguish	21	evaluate	16	improve	5
recognize	14	give examples	8	interpret	15	divide	12	explain	9	integrate	4
record	13	identify	14	interview	6	evaluate	4	grade	4	invent	10
relate	11	illustrate	9	manipulate	10	examine	18	invent	8	make	6
repeat	20	indicate	8	modify	12	experiment	9	judge	25	manage	8
reproduce	11	infer	15	operate	17	figure	4	manage	15	modify	10
review	4	interpolate	5	organize	4	group	4	mediate	9	organize	21
select	16	interpret	17	paint	4	identify	7	prepare	12	originate	9
state	23	locate	10	practice	15	illustrate	8	probe	4	plan	21
tabulate	4	match	7	predict	9	infer	14	rate	5	predict	8
tell	4	observe	5	prepare	11	inspect	8	rearrange	19	prepare	12
underline	7	organize	5	produce	13	inventory	9	reconcile	12	produce	13
write	5	paraphrase	22	relate	12	investigate	7	release	6	propose	9
		predict	12	schedule	11	order	5	rewrite	4	rate	21
		recognize	11	select	4	organize	6	select	5	rearrange	8
		relate	7	show	13	outline	10	set up	15	reconstruct	9
		report	10	simulate	5	point out	12	supervise	9	relate	8
		represent	4	sketch	17	predict	4	synthesize	16	reorganize	9
		restate	15	solve	19	prioritize	4	test	8	revise	12
		review	15	translate	5	question	12	value	7	rewrite	7
		rewrite	12	use	25	relate	17	verify	9	role-play	4
		select	7	utilize	4	select	12	weigh	5	set up	9
		summarize	20	write	5	separate	10			specify	5
		tell	7			solve	8			summarize	7
		translate	21			subdivide	10			synthesize	4
						survey	7			tell / tell why	5
						test	14			write	17

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Rubric Template

Criterion (Score 0 if element is absent)	Below Expectations (1)	Meets Expectations (2)	Exceeds Expectations (3)	Score
Identify each grading element or criterion (example of a criterion element and descriptors follow below)	Describe typical problems, weaknesses, or errors that characterize student work that does not meet expectations for the assignment.	Describe characteristics of student work that meet expectations for quality on this criterion.	Describe characteristics of student work that make a submission stand out as exemplary work.	
Use of evidence to support assertions	Assertions based on personal opinion only. Assertions are based on empty citations: citation information is given as support for an assertion but no information is provided about the content of the cited work or how or why the cited work/author supports the assertion made. Factual errors: the cited work does not actually support the assertion made in the assignment and/or is described inaccurately.	Assertions are supported with appropriate evidence. Appropriate evidence includes an interpretation of empirical data, description of arguments and evidence presented in a scholarly source that supports the assertion (with appropriate citation of the source). Evidence provided in support of an argument is described and interpreted correctly.	Assertions supported with evidence (as described in *meets expectations*). Assertions are supported with multiple sources of evidence based on primary sources. When relevant, opposing positions are considered and arguments discounting these positions are supported with relevant scholarly evidence. Synthesizes evidence to draw new, relevant, logical inferences.	
Criterion 2	Descriptions of typical problems	Descriptions of expectations for this criterion for the assignment	Descriptions of qualities that characterize exemplary work	
Criterion 3	Descriptions of typical problems	Descriptions of expectations for this criterion for the assignment	Descriptions of qualities that characterize exemplary work	
			TOTAL	

Using the Rubric Template

This template was created using the Word table function.

Insert descriptions of grading criteria in cells the first column. Cells will expand to accommodate additional text.

To create rows for additional grading criteria, right click on a cell in a row. Select the **insert** menu and then select either **Insert Rows Above** or **Insert Rows Below** to insert one additional row. Repeat as needed.